G302(P) AN AUDIT ON THE MANAGEMENT OF BRONCHIOLITIS

¹B Umerji, ¹M Yusuf, ²K Sugumar. ¹General Medicine, East Lancashire Hospitals Trust, Blackburn, UK; ²Paediatrics, Lancashire Hospitals, Preston, UK

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Bronchiolitis is the most common reason for hospitalization in children under the age of 2 years, resulting in a considerable burden to paediatric services. The mainstay of managing bronchiolitis is supportive through administering oxygen and fluids or feed supplements. Current research suggests that there is no definitive pharmacological treatment showing significant benefit in children with bronchiolitis and that can alter the course of the disease. Such treatments are still widely prescribed by clinicians despite limited evidence of their efficacy. This potentiates an increased likelihood of adverse side effects as well as costs to the NHS. I retrospectively reviewed 90 admissions of bronchiolitis from November 2015 to assess compliance rates with the June 2015 National Institute of Health and Clinical Excellence (NICE) guidelines on bronchiolitis management. NICE guidelines do not recommend the use of pharmacological treatments such as bronchodilators, hypertonic saline, corticosteroids, antivirals and antibiotics among others. Despite the guidelines, at our unit hypertonic saline and salbutamol was prescribed in 16% of cases, atrovent in 29%, antibiotics in 4% and steroids in 2% of cases. Nebulised adrenaline (with or without steroids) and montelukast were not prescribed at all. Thus, compliance rates of managing bronchiolitis with NICE guidelines are above 70%. Further analysis of these groups that received treatments did not reveal any identifiable patterns or trends as to why they are still being prescribed, making it more difficult to propose individualized recommendations to reduce this. Targeted educational strategies may help in improving compliance rates to guidelines.

G303(P) PARENT AND PATIENT PERCEIVED SIDE EFFECTS OF PAEDIATRIC FLEXIBLE BRONCHOSCOPY

MG Semple, JH Bamforth. ¹PhD FRCPCH, Faculty of Health and Life Science, University of Liverpool, Liverpool, UK; ²School of Medicine, University of Liverpool, Liverpool, UK

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Background A literature review was conducted on the side effects of paediatric flexible bronchoscopy services. None directly reported the experience of patients and their parents. The experience of patients and their parents attending the paediatric flexible bronchoscopy service at our children's hospital has not been evaluated.

Aim To evaluate parent and patient reported side effects of paediatric flexible bronchoscopy, in order to improve the paediatric flexible bronchoscopy service offered at the hospital and the validity of its consent.

Methodology Patients, and parents of those patients, undergoing flexible bronchoscopy at this children's hospital between June 2018 and February 2019 were surveyed post-discharge from the flexible bronchoscopy procedure. The survey was created using themes from Monkey Wellbeing, a child-friendly company who create friends and family tests used to determine patient satisfaction across a range of medical and surgical specialities. The survey was completed online and had

Abstract G303(P) Table 1

	% of Children Experiencing Side Effect
Cough	47
Sore Throat	47
Hoarse Voice	26

separate sections for parents and patients. We asked them to provide information regarding the side effects experienced within the 48 hours following the procedure.

Results There were 16 responses from parents of children aged 0–15 years. The most common side effects reported among the parental responses were cough, a sore throat and a hoarse voice (see table 1). The 3 most common side effects reported by patients were concordant with this.

No difference was found between the side effects experienced by younger children and older children. 95% of the parents reported that side effects had no non-trivial effect on their children, and 75% of children had fully recovered within 24 hours.

Conclusion The side effects most commonly reported were those identified from the literature review. Among the children surveyed, no severe adverse effects occurred following the procedure, and the children generally recovered quickly. This information can be given to parents of children undergoing the procedure in the future in order to improve the validity of consent for paediatric flexible bronchoscopy.

G304(P) A CASE OF RELAPSING POLYCHONDritis IN A PAEDIATRIC PATIENT WITH SEVERE AIRWAY INVOLVEMENT – THE CHALLENGES OF LONG TERM AIRWAY & RESPIRATORY MANAGEMENT

^{1,2}T Kothari, ¹E Magnussen, ³P Dawson, ³E Al Abadi, ^{2,4}M Elloy, ⁵A Sridhar, ¹S Kapoor, ¹S Bandi, ^{1,2,6}I Ahmed. ¹Paediatrics, Leicester Childrens Hospital, Leicester, UK; ²Paediatric Respiratory, Leicester Childrens Hospital, Leicester, UK; ³Paediatric Rheumatology, Birmingham Childrens Hospital, Birmingham, UK; ⁴Paediatric ENT, Leicester Childrens Hospital, Leicester, UK; ⁵Paediatric Rheumatology, Leicester Childrens Hospital, Leicester, UK; ⁶University of Leicester, Leicester, UK

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Background Relapsing polychondritis (RP) in childhood is a rare multi-system disease characterised by inflammation of multiple cartilages. Progressive destruction of cartilaginous tissues in patients with tracheobronchial involvement can lead to life threatening exacerbations.

Diagnosis in children and young people is often delayed due to rarity of this condition although the clinical course is often more severe than in adults with a higher incidence of laryngotracheobronchial involvement.

Case Report A 14-year-old of African descent presented to the children's hospital with evidence of auricular inflammation, anterior rib pain and red, painful eyes. She had raised inflammatory markers and was treated with broad-spectrum antibiotics. RP was suspected and high dose oral steroids were commenced, improving all symptoms.

On weaning steroids, she quickly relapsed and presented with upper airway problems including stridor, barking cough and increased work of breathing. Initial flexible nasendoscopy showed interarytenoid and subglottic oedema and likely

tracheobronchitis. She was commenced on Rituximab and a six-month course of Cyclophosphamide.

CT Neck and thorax showed focal obliteration of the airway at the level of hypopharynx and narrowing of left main bronchus. CT bronchogram showed the narrowing improved on a PEEP of 12 cm H₂O. She was trialled on BiPAP overnight which helped her symptoms. She was referred to Great Ormond Street Hospital for a review; no further changes in management were suggested.

The patient had recurrent relapses needing intensive care, therefore she was started on methotrexate and adalimumab, and had a balloon dilatation for her subglottic oedema and stenosis, which she tolerated well. She has been discharged home on overnight BiPAP with a plan for monthly balloon dilatations with ENT and to continue on methotrexate and adalimumab with gradual wean of steroids.

Conclusion RP is rare with estimated incidence of 3.5 per million, only 10% cases are seen in paediatrics. Without aggressive and prompt treatment, life-threatening complications can develop rapidly, and outcomes are poor. Managing children with RP with significant airway involvement with NIV and repeated monthly balloon dilatations can help prevent life threatening exacerbations and the need for a tracheostomy. This case demonstrates the importance of multidisciplinary management of this complex condition.

G305(P) ABSTRACT WITHDRAWN

G306(P) A RARE CASE OF CONGENITAL LEFT LUNG APLASIA DIAGNOSED ANTENATALLY

¹M Jagga, ²P Thompson, ¹SV Rasiah. ¹Neonatal Unit, Birmingham Women's and Children's NHS FT, Birmingham, UK; ²Maternity Unit, Birmingham Women's and Children's NHS FT, Birmingham, UK

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Introduction Pulmonary agenesis was first described in 1673 by De Pozze in a female cadaver biopsy. The condition is characterised by undeveloped pulmonary vessels, bronchi, and parenchyma. It can present bilaterally or unilaterally and, in the latter, the remaining lung contains twice as much alveoli as normal, but has normal bronchi. Although the aplastic side does not have the same structures, it has a rudimentary bronchus. It is extremely rare, occurring in 1:100,000 births. Nearly a third of patients have associated congenital heart diseases. We report a case of unilateral left lung aplasia which was diagnosed antenatally.

Case Report A female baby was born by vaginal delivery at term, weighing 3700 grams. Antenatally the baby was noted to have mediastinal shift on 20 week scan, raising suspicion and leading to a diagnosis of complete left lung aplasia, left pulmonary artery hypoplasia, with normal right lung on subsequent MRI scan at 28 weeks gestation. Foetal ECHO showed normal cardiovascular anatomy.

Baby cried immediately at birth and did not require any resuscitation but started to show signs of respiratory distress at about 15 minutes of age. Baby was transferred to the neonatal intensive care unit and managed on 6 litres of high flow until 12 hours of age. Chest x-ray shows mediastinal shift to the left, with possible right lung

hyperplasia and a small undeveloped left lung. She was subsequently breathing by herself with no signs of respiratory distress and discharged home with paediatric respiratory follow-up.

Conclusion Unilateral lung aplasia is a rare congenital anomaly, usually diagnosed later in life as an incidental finding. It is very rare for antenatal diagnosis, especially if not associated with congenital heart defects. This case was identified because of the mediastinal shift. Children with unilateral lung aplasia are at an increased risk of respiratory tract infections and need regular follow up with respiratory team. Right sided lung aplasia might be associated with Scimitar syndrome. Finally, cases from the literature show poorer outcomes associated with right sided lesions (30% survival into adulthood) compared to left sided lesions (50% survival into adulthood).

G307(P) DOES RAISED FRACTIONAL EXHALED NITRIC OXIDE ALWAYS MEAN POOR COMPLIANCE? A CASE BASED OBSERVATION

¹FG Belais, ²W Kozłowska. ¹Clinical school of Medicine, University of Cambridge, Cambridge, UK; ²Paediatrics, Addenbrookes Hospital, Cambridge University Hospitals Trust, Cambridge, UK

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Background Fractional exhaled nitric oxide (FeNO) is a well-established inflammation marker in asthma monitoring. It has a diagnostic and prognostic value, helpful in predicting exacerbation rates.¹ The expectation with initiation of treatment is for lung function to improve and FeNO to decrease as inflammation resolves. In some patients, FeNO rises further despite treatment, which some suggest is due to poor compliance. However, this is inconsistent for patients where lung function improves.

Objective Demonstrate that raised FeNO after treatment initiation does not necessarily equate poor compliance.

Method Retrospective retrieval of full spirometry results of pediatric patients started on asthma treatment in the last 2 years.

Results 5 children/young people have incongruent improvement in FEV1 in parallel to an increase in FeNO after initial treatment (table 1).

Conclusion The results question whether increased FeNO is always due to poor compliance. Perhaps the initial low FeNO is due trapped gas, which then escapes as airways open with

Abstract G307(P) Table 1

Patient	FEV1% predicted (%)	FeNO (ppb)	Time interval (days)
1	86	51	0
	94	92	216
2	67	31	0
	69	139	175
3	78	14	0
	93	50	350
4	83	17	0
	97	38	259
5	92	12	0
	93	29	77